

**ABSTRACT**

5 A method of providing restoration routes for protecting traffic in a mesh network is described. The method comprises the steps of generating a set of eligible restoration routes for each span in the network, establishing a bi-criteria objective function in terms of route length and capacity cost for selecting a set of restoration routes, and selecting a set of restoration routes for each span from the eligible restoration routes in dependence upon the bi-criteria objective function. Embodiments of the invention may be useful for  
10 shortening the lengths, in terms of hops, of existing restoration routes in a mesh-restorable network and in some cases with negligible spare capacity penalty.